

REMARKS

Claims 49, 57, 58 and 79-81 are pending in the subject application, with claims 1-48, 50-56 and 59-78 having previously been canceled without prejudice or disclaimer. By this Amendment, claim 49 has been amended to clarify the claimed subject matter. Support for the claim amendment can be found in the application as originally filed, for example, at page 23, line 34 through page 24, line 7, and page 33, lines 4-5. Accordingly, Applicant respectfully requests that this Amendment be entered. Claims 49, 57, 58 and 79-81 remain pending upon entry of this amendment, with claim 49 being the sole pending claim in independent form.

Rejections Under 35 U.S.C. § 103(a)

In section 4 of the September 2, 2010 Office Action, claims 49, 57, 58 and 79-81 were rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Hollis et al. (US 5,846,708) in view of Cozzette et al. (US 5,063,0841).

Applicant respectfully submits that the present application is allowable over the cited art, for at least the reason that the cited art does not disclose or suggest the aspects of the present application of a method for analyzing a sample oligonucleotide sequence *in solution* comprising ... (b) providing a ***permeation layer adjacent to said micro-electrode*** in each of said microscopic locations, said permeation layer ***having selective diffusion properties*** thereby permitting the free transport of counter-ions to said micro-electrode and inhibiting large binding entities from physical contact with said micro-electrode ... ***wherein at least about 5-25% of the surface of said micro-electrode is accessible to solvent molecules in the solution.***

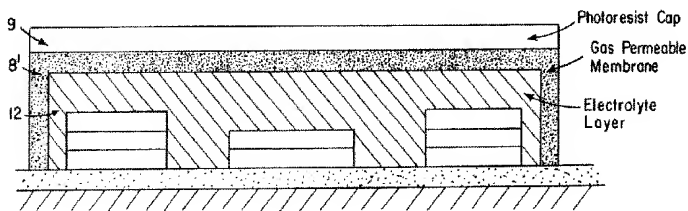
Hollis, as acknowledged in the Office Action, does NOT disclose or suggest a permeation layer having selective diffusion

properties.

In addition, applicant maintains that Hollis does NOT disclose or suggest keeping a portion of the surface of a micro-electrode accessible to solvent molecules. To the contrary, in column 9, lines 24-27 Hollis states "The wells are passivated with a thin protective layer (not shown), such as silicon nitride or glass, SiO₂ or polyimide to prevent degradation of the CCD device due to exposure to aqueous solution". Thus, according to Hollis, exposure of an electrode surface to a solution is not desired in the device of Hollis.

Cozzette, as understood by applicant, proposes an amperometric oxygen sensor as shown in Fig. 7B (reproduced below) of Cozzette, including a photoresist cap 9, a permselective layer (e.g. a gas permeable membrane 8') and an electrolyte layer 12.

FIG. 7B



The gas permeable membrane of Cozzette is an example in Cozzette of a permselective layer and is equated in the Office Action to both the permeable layer and attachment layer of the present application. In other embodiments in Cozzette, the permselective layer is derived from a silanizing agent. The electrolyte layer

in Cozzette is equated in the Office Action to a micro-electrode.

Cozzette, as understood by applicant, does not disclose or otherwise discuss the extent by which an electrode surface of the electrolyte layer (equated in the Office Action to a micro-electrode) should be covered from a solution.

Moreover, Cozzette proposes features that would teach away from making 5 to 25% of the surface of said electrolyte layer accessible to solvent molecules in a solution as recited in claim 1 of the present application.

For example, according to Cozzette, column 20, lines 29-37, a permselective layer derived from a silanizing agent is established as a film across the wafer or localized over preselected areas of the wafer or base sensor, and solvents suitable for use in forming the silane mixture may include, for example, nonionic surfactants which aid in planarizing of the silane film (Cozzette, column 28, lines 19-29). Cozzette (column 14, lines 37-39) further states that "The gas permeable membrane also insulates the immediate environment of the electrode portion of the biosensor from external fluid turbulence". Thus, according to Cozzette, the electrolyte layer should be fully covered by a permselective layer.

Additionally, in column 43, lines 32-38, Cozzette states that "the principal distinction between Figs. 7A and 7B is that the gas permeable layer 8' effectively envelopes the entire underlying electrolyte layer in the configuration of Fig. 7B, and, thus, more effectively seals off the electrode region from the external fluid."

Cozzette simply does not teach or suggest the aspects of the present application of ... (b) providing a **permeation layer**

adjacent to said micro-electrode in each of said microscopic locations, said permeation layer *having selective diffusion properties* thereby permitting the free transport of counter-ions to said micro-electrode and inhibiting large binding entities from physical contact with said micro-electrode ... *wherein at least about 5-25% of the surface of said micro-electrode is accessible to solvent molecules in the solution.*

Applicant submits that the cited art, even when considered along with common sense and common knowledge to one skilled in the art, does **NOT** render unpatentable the aforementioned aspects of the present application.

Accordingly, applicant submits that claim 49 and the claims depending therefrom are allowable over the cited art.

In view of the remarks hereinabove, applicant maintains that the application is now allowable. Accordingly, applicant earnestly solicits the allowance of the application.

However, if the Examiner can suggest an amendment that would advance this application to condition for allowance, the Examiner is respectfully requested to call the undersigned attorneys.


If a petition for an extension of time is required to make this response timely, this paper should be considered to be such a petition.

Michael J. HELLER et al.
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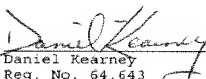
No fee is deemed necessary in connection with the filing of this Amendment. However, if any fees are required, authorization is hereby given to charge the amount of any such fee to Deposit Account No. 03-3125.

Respectfully submitted,



John P. White, Reg. No. 28,678
Paul Teng, Reg. No. 40,837
Attorneys for Applicant
COOPER & DUNHAM LLP
30 Rockefeller Plaza, 20th Floor
New York, New York 10112
Tel.: (212) 278-0400

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Daniel Kearney Date
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